The Center for Climate Strategies

Helping States and the Nation Tackle Climate Change

Florida Energy Commission: State Climate and Energy Plan Development

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Center For Climate Strategies

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Center for Climate Strategies

- Nonprofit 501c3 policy development group service organization with over 20 experts located across the US
- Partner with states to develop climate action policies and plans
- Provide impartial facilitation, technical analysis, planning support, and cost share
- Supported by states and a consortium of private foundations
- Multiple areas of technical and policy expertise including: climate, energy, transportation, natural resources, economic development
- Tom Peterson, Executive Director

The Challenge

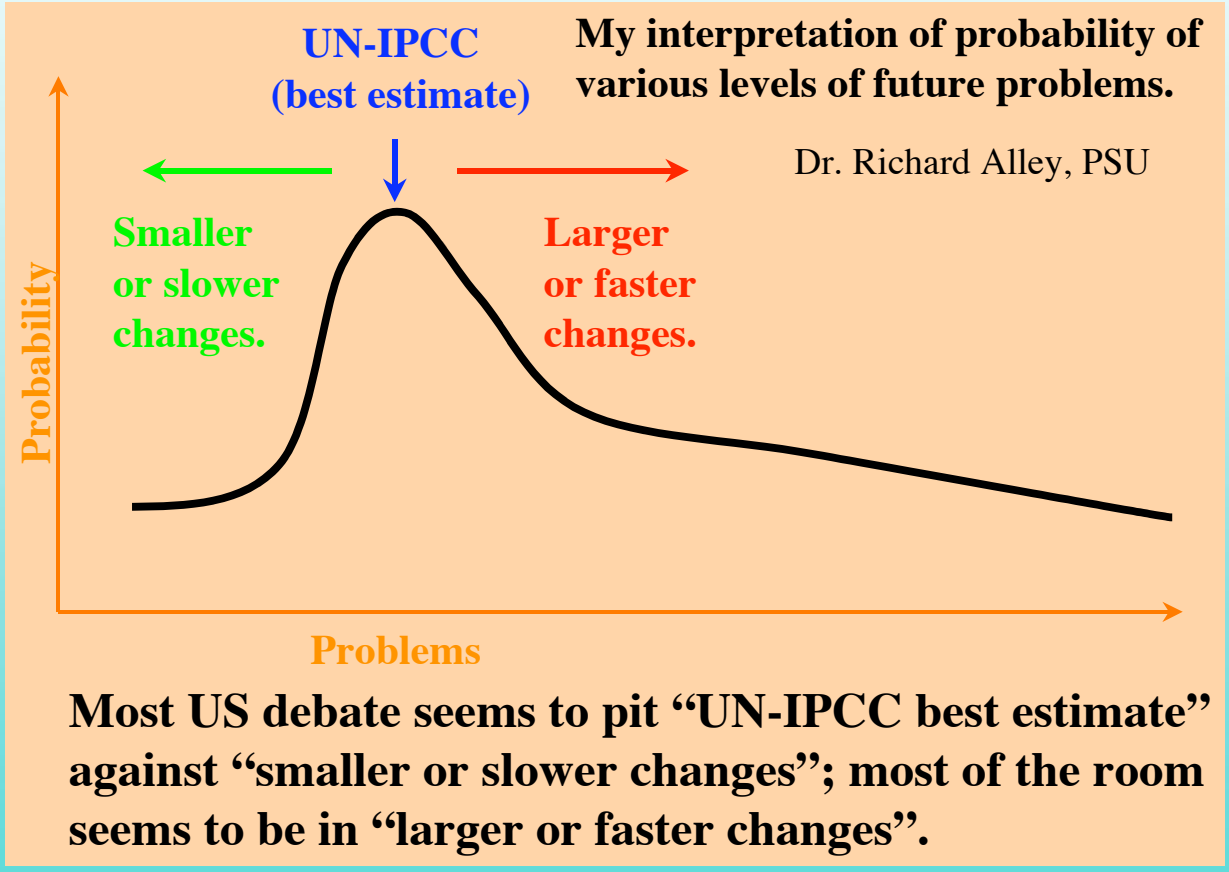
- "The ultimate objective of this Convention .... is to achieve, …. stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."
  - UNFCCC Article 2 Objective,
  - Rio De Janeiro

One Degree at a Time…

Greenhouse Gases

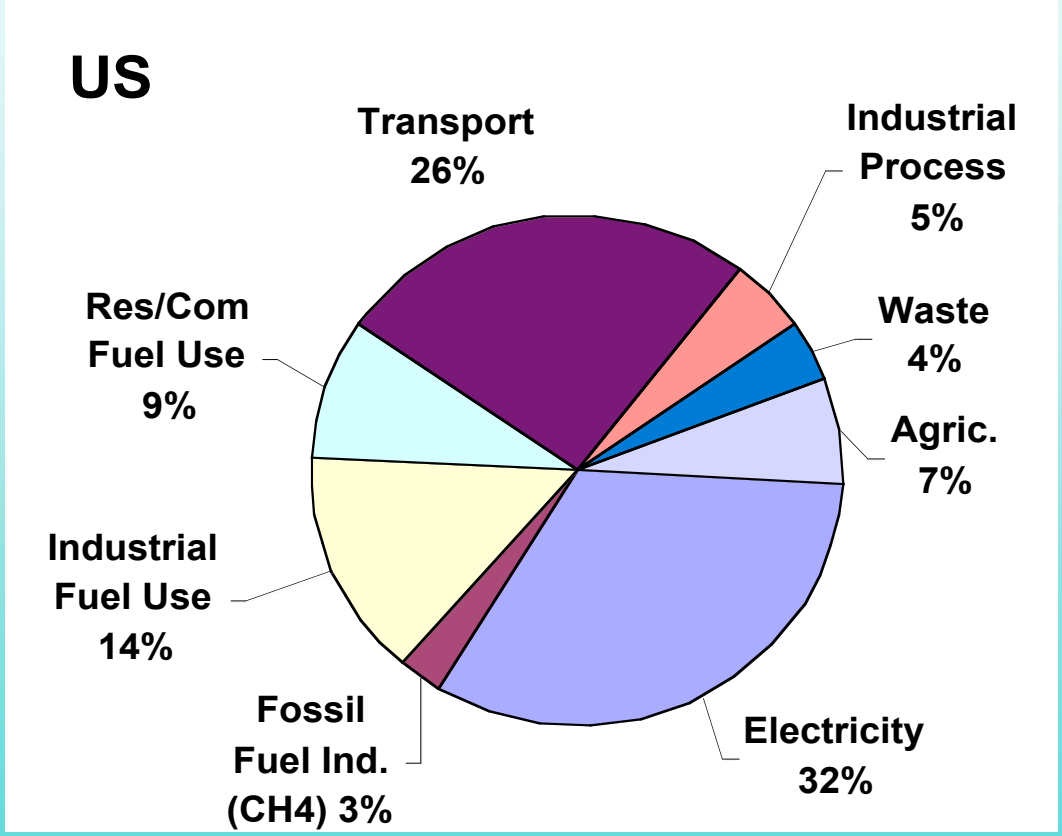
- Include CO2 (80% of total), CH4, N2O, HFC's, PFC's, and Black Carbon
  - One gallon of gasoline = 20 pounds CO2
  - One ton of coal = 3500-4400 pounds CO2
  - One cord of hardwood = 500 pounds CO2
- Mix quickly in the atmosphere and last long time
- Caused by many activities
- Accumulating at unnaturally high concentrations
- Cause global warming and other effects

Climate Change Risks



Most US debate seems to pit "UN-IPCC best estimate" against "smaller or slower changes"; most of the room seems to be in "larger or faster changes".

US 2000 Emissions By Sector



Energy Issues

- Reliability
- Efficiency
- Affordability
- Diversity
- Environment

Faith and Leadership

- "…As the children stared at the large stone wall around the orchard and wondered how they would ever scale it, one threw his hat over and said: "Now we must find a way"…"
  - Maine Governor John Baldacci at the launch of the Maine Climate Change Stakeholder Process, 2003

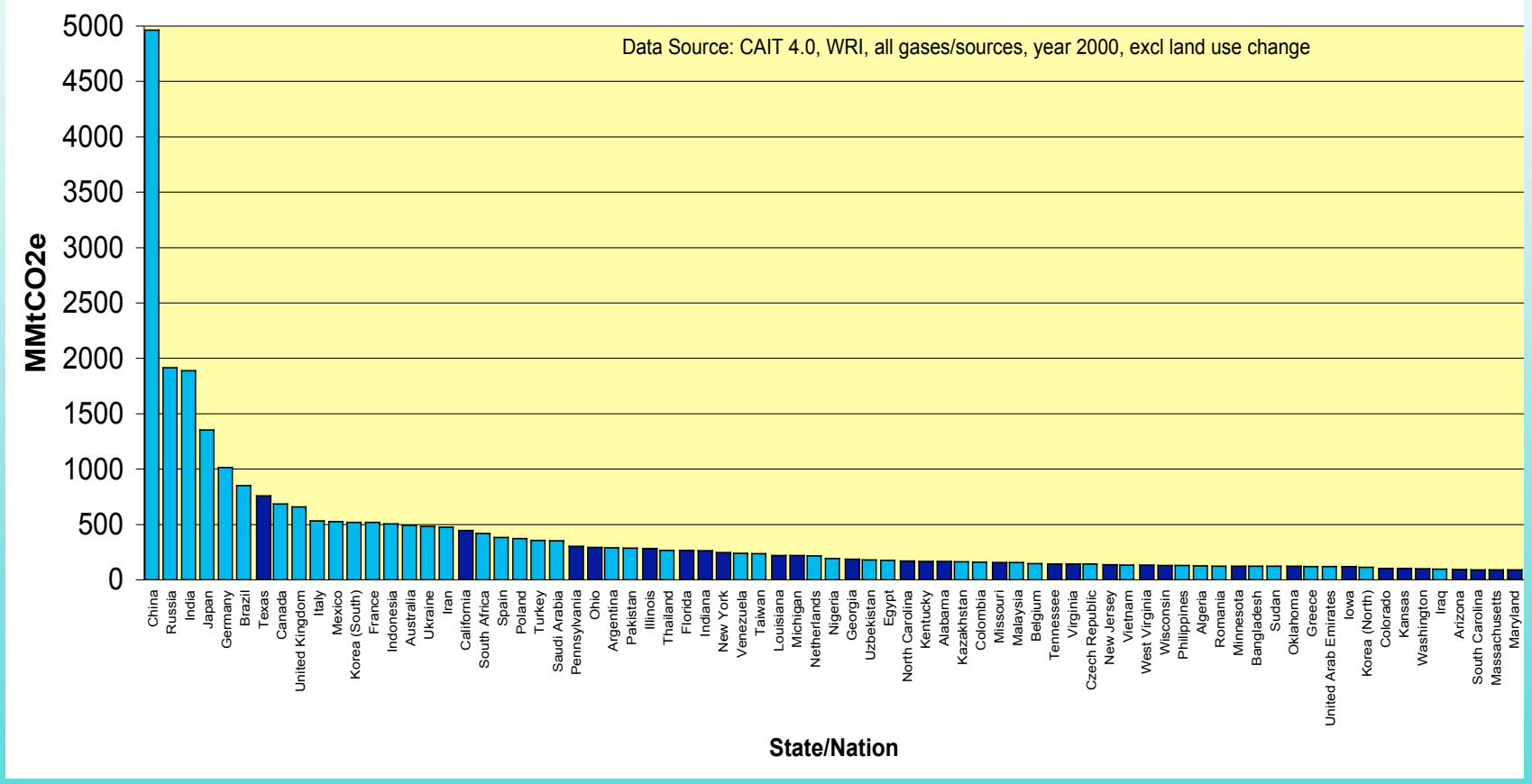
Conflict Resolution

- Transparent, democratic process
- Comprehensive approach
- Advanced fact finding
- Full range of choice
  - Efficiency mechanisms
  - Flexibility mechanisms
  - Equity mechanisms

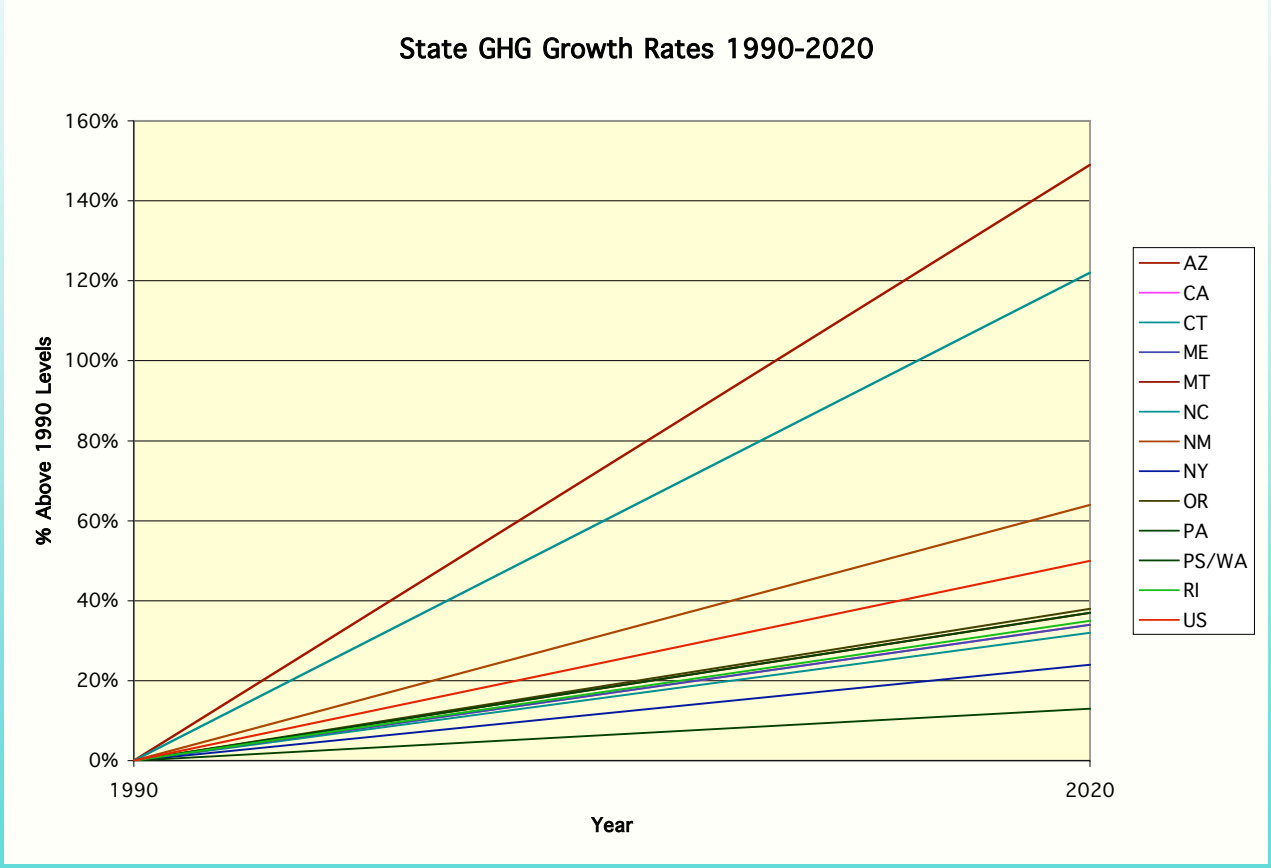
Reasons for State Climate Action

- Coincidence
- Co-benefits, including energy policy
- Avoid climate damages
- Shape policy and form markets
- Guide national solutions
- Confidence about solutions
- Political leadership

US States:
30 of Top 75 Emitters



State GHG Growth Rates



Temperature Projections

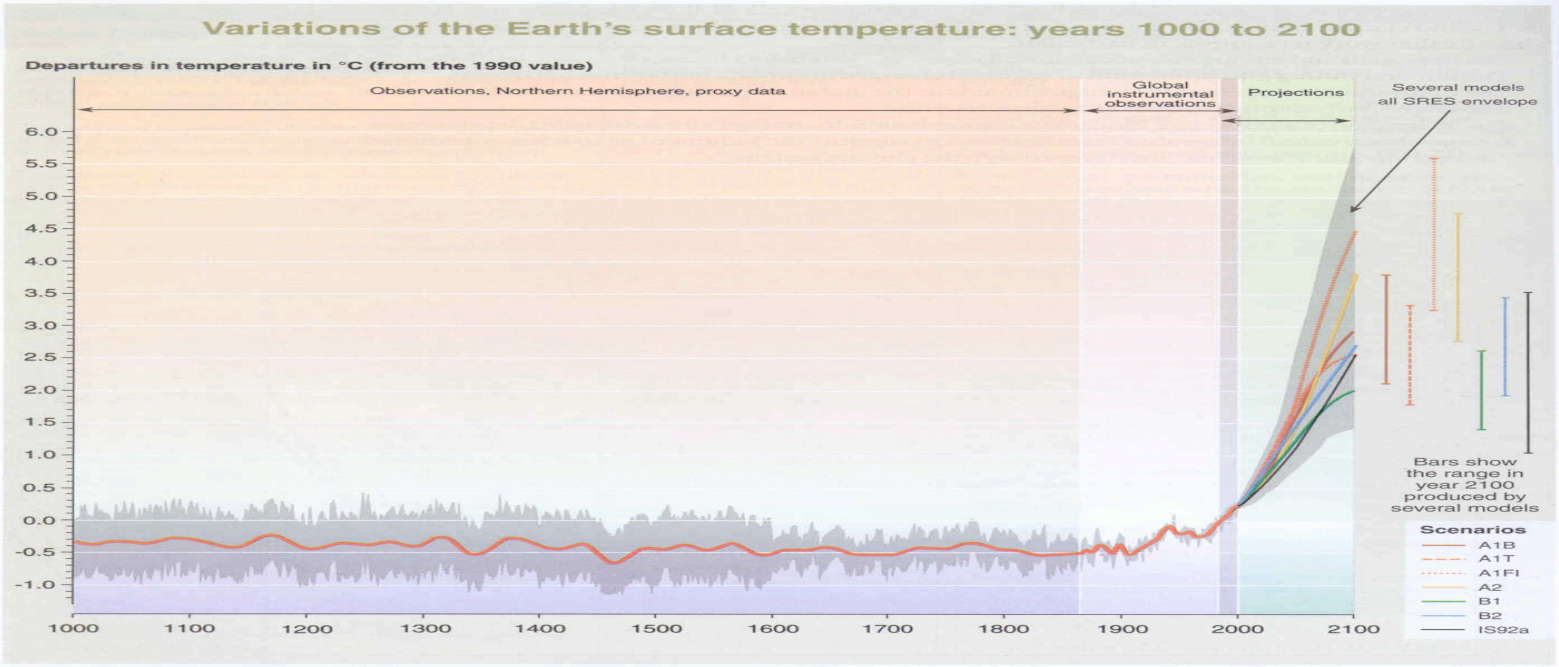


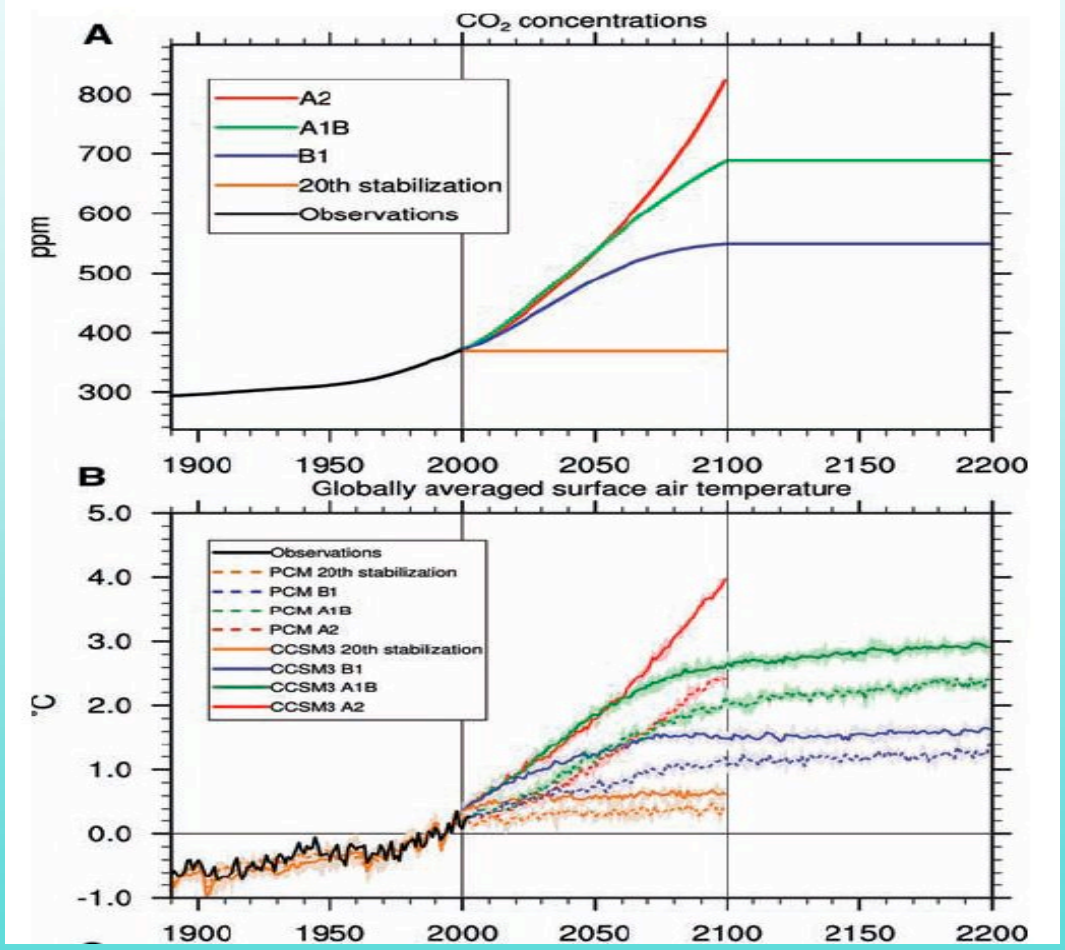
Figure SPM-10b: Variations of the Earth's surface temperature: years 1000 to 2100. From year 1000 to year 1860 variations in average surface temperature of the Northern Hemisphere are shown (corresponding data from the Southern Hemisphere not available) reconstructed from proxy data (tree rings, corals, ice cores, and historical records). The line shows the 50-year average, the grey region the 95% confidence limit in the annual data. From years 1860 to 2000 are shown variations in observations of globally and annually averaged surface temperature from the instrumental record; the line shows the decadal average. From years 2000 to 2100 projections of globally averaged surface temperature are shown for the six illustrative SRES scenarios and IS92a using a model with average climate sensitivity. The grey region marked "several models all SRES envelope" shows the range of results from the full range of 35 SRES scenarios in addition to those from a range of models with different climate sensitivities. The temperature scale is departure from the 1990 value; the scale is different from that used in Figure SPM-2.

Q9 Figure 9-1b

Stabilization Scenarios

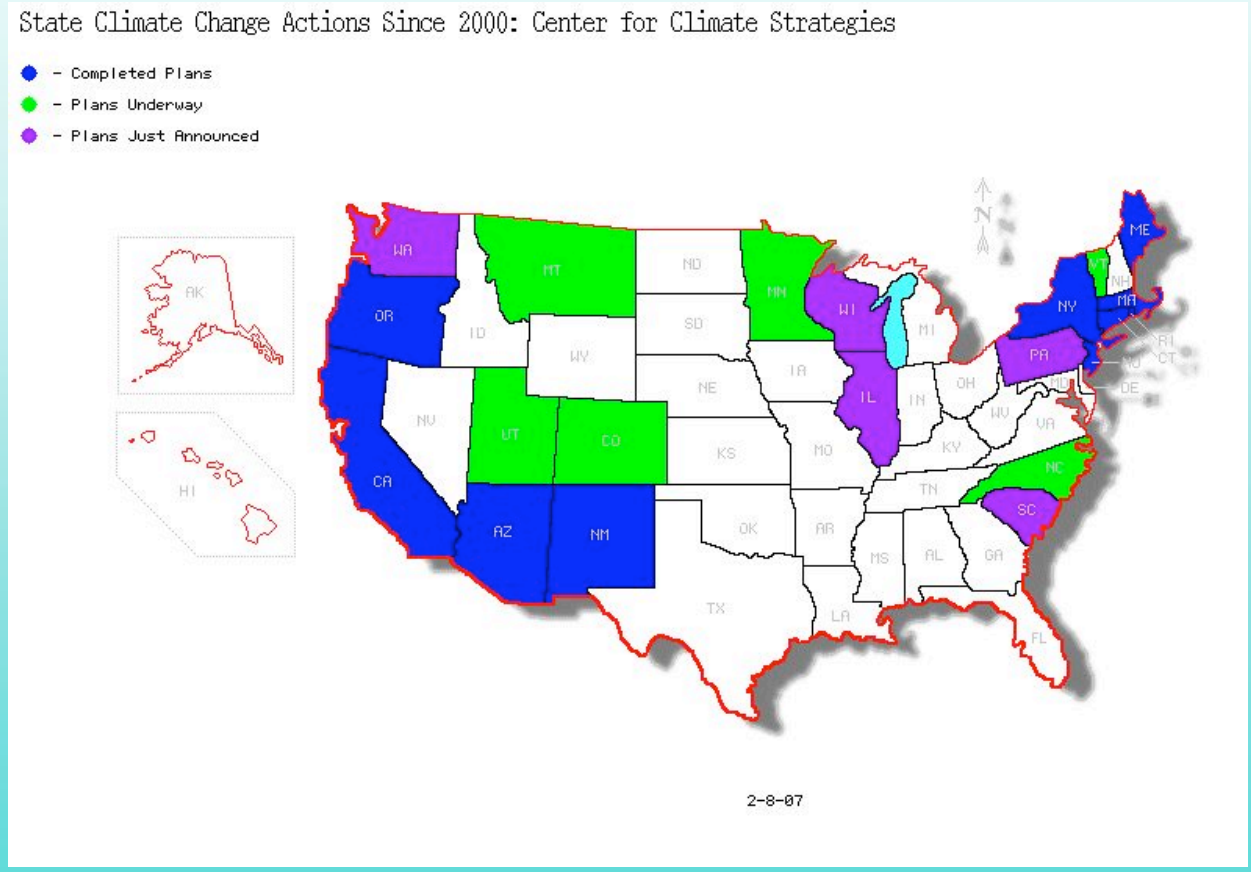
Carbon Dioxide Concentration

Warming (°C)



Progress Through Action!

Comprehensive State Climate Mitigation Action Plans



Structure of State Climate Plans

- Inventories and forecasts of GHG emissions
- Portfolios of mitigation actions
  - Combination of "what" and "how" across many sectors and implementation mechanisms
- Reporting and implementation systems
- Goals and targets
- Multi state systems

Policy Measures -- “What”

- Over 300 US state actions reduce GHGs
  - Energy efficiency and conservation
  - Clean and renewable energy
  - Transportation and land use efficiency
  - Forest and agriculture conservation
  - Waste management
  - Industrial process improvement

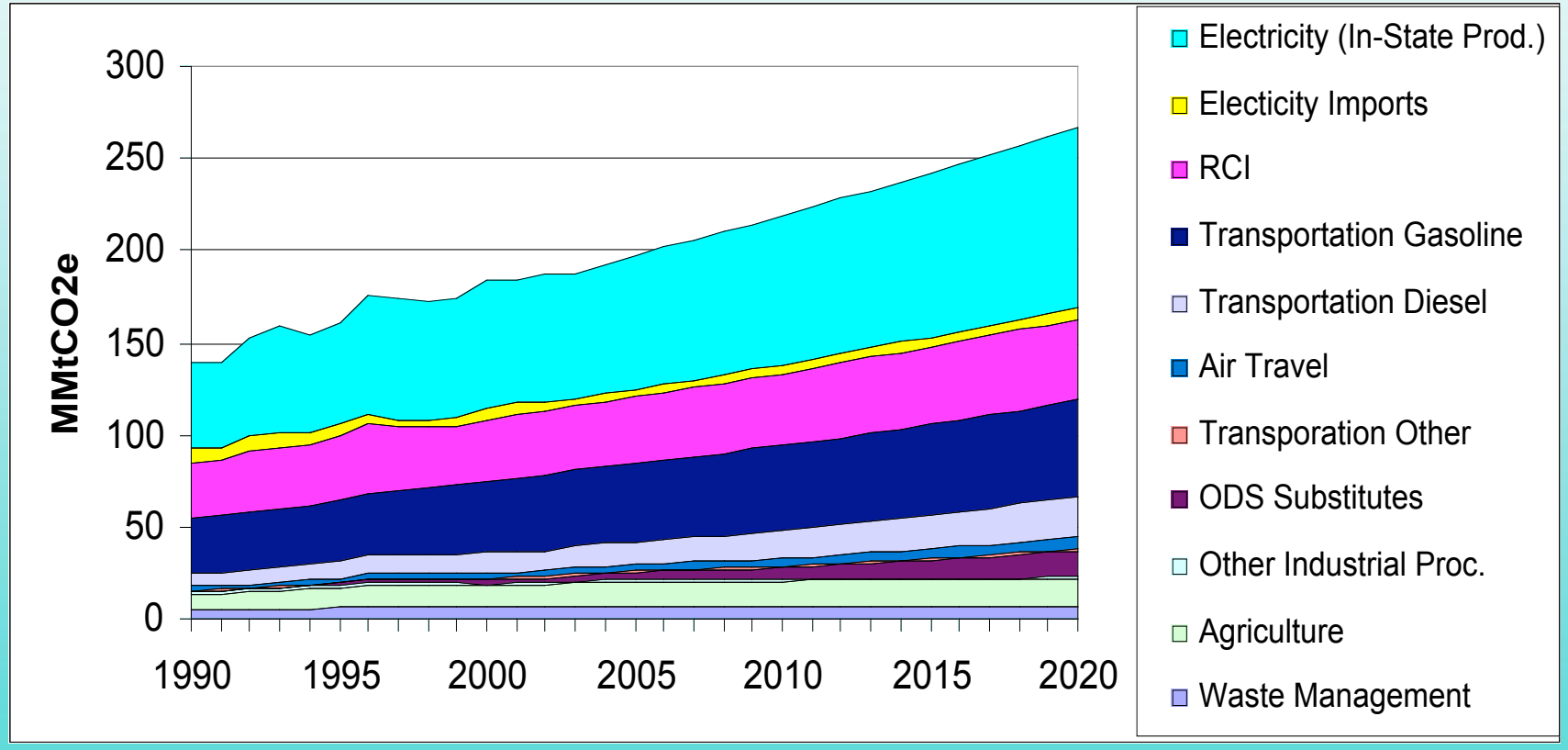
Implementation -- “How”

- Voluntary Agreements
- Technical Assistance
- Financial Incentives
- Targeted Spending
- Codes and Standards
- Market Based Approaches
- Pilots and Demos
- Information and Education
- Research and Development
- Reporting and Disclosure

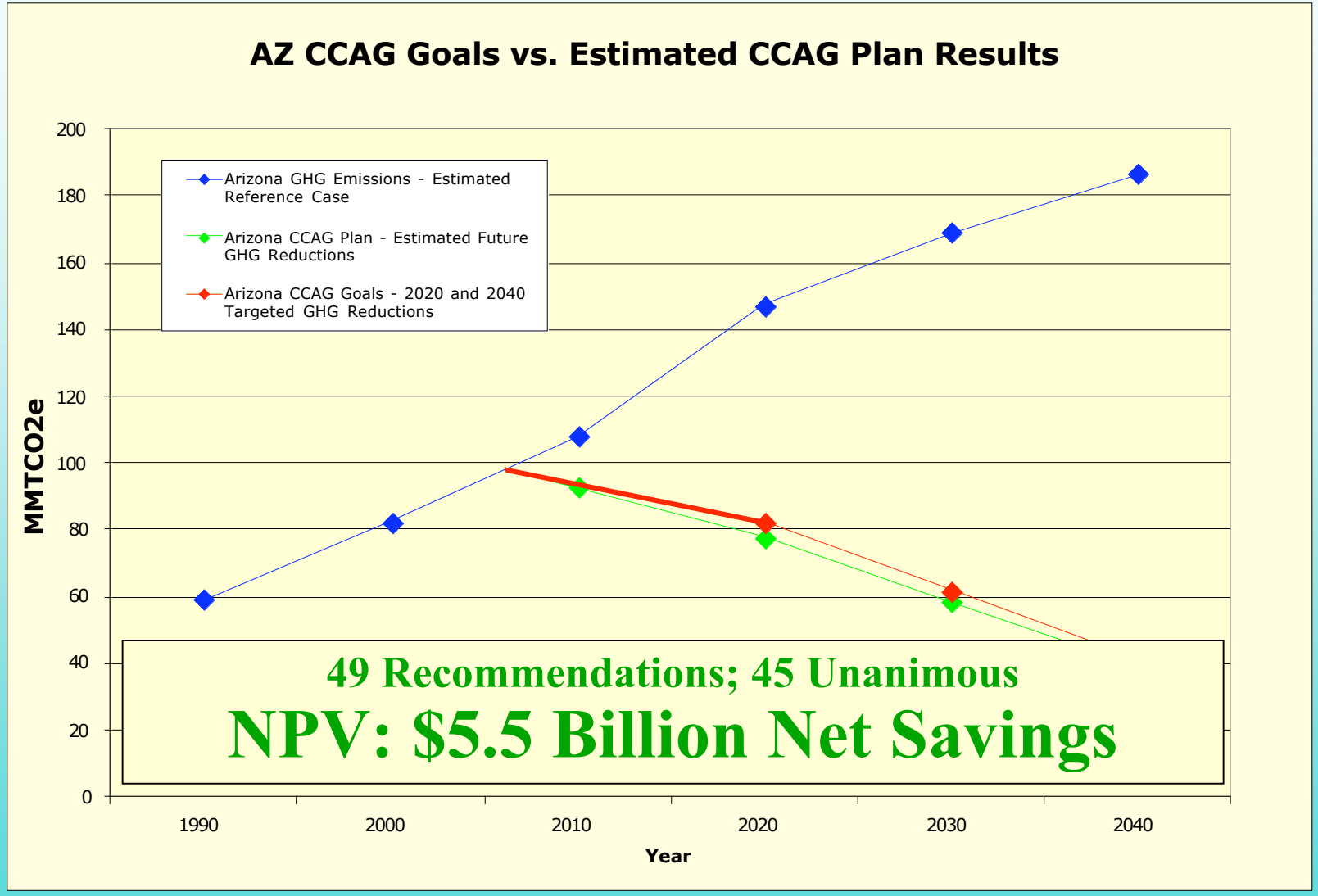
Policy Planning Process

- Develop inventory and forecast of emissions, existing actions
- Identify a full range of possible choices
- Identify initial priority options
- Develop straw policy design proposals
- Quantify GHG reductions and costs/savings
- Develop alternatives to address barriers
- Aggregate results
- Establish goals or targets

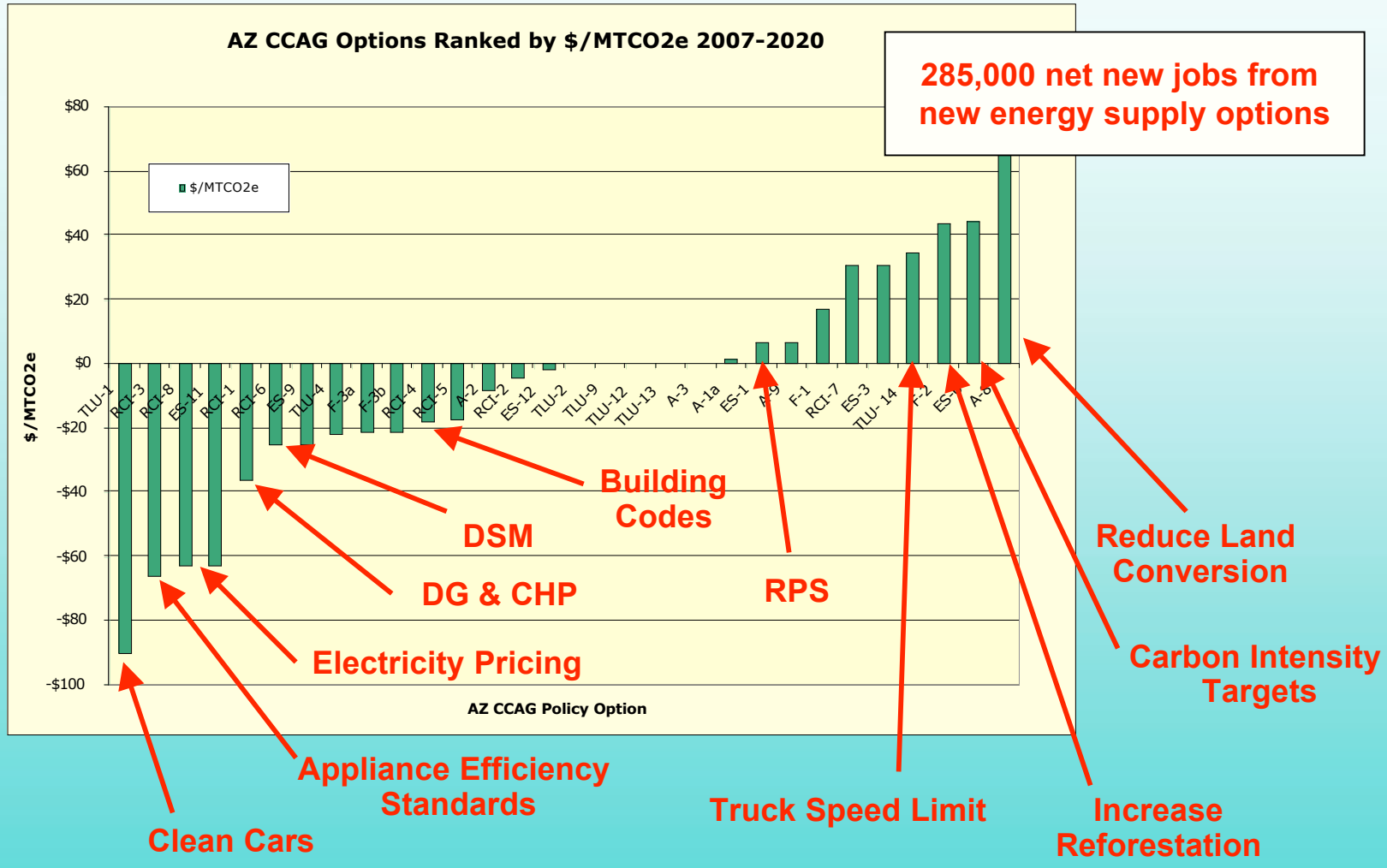
Example: North Carolina GHG Inventory & Forecast



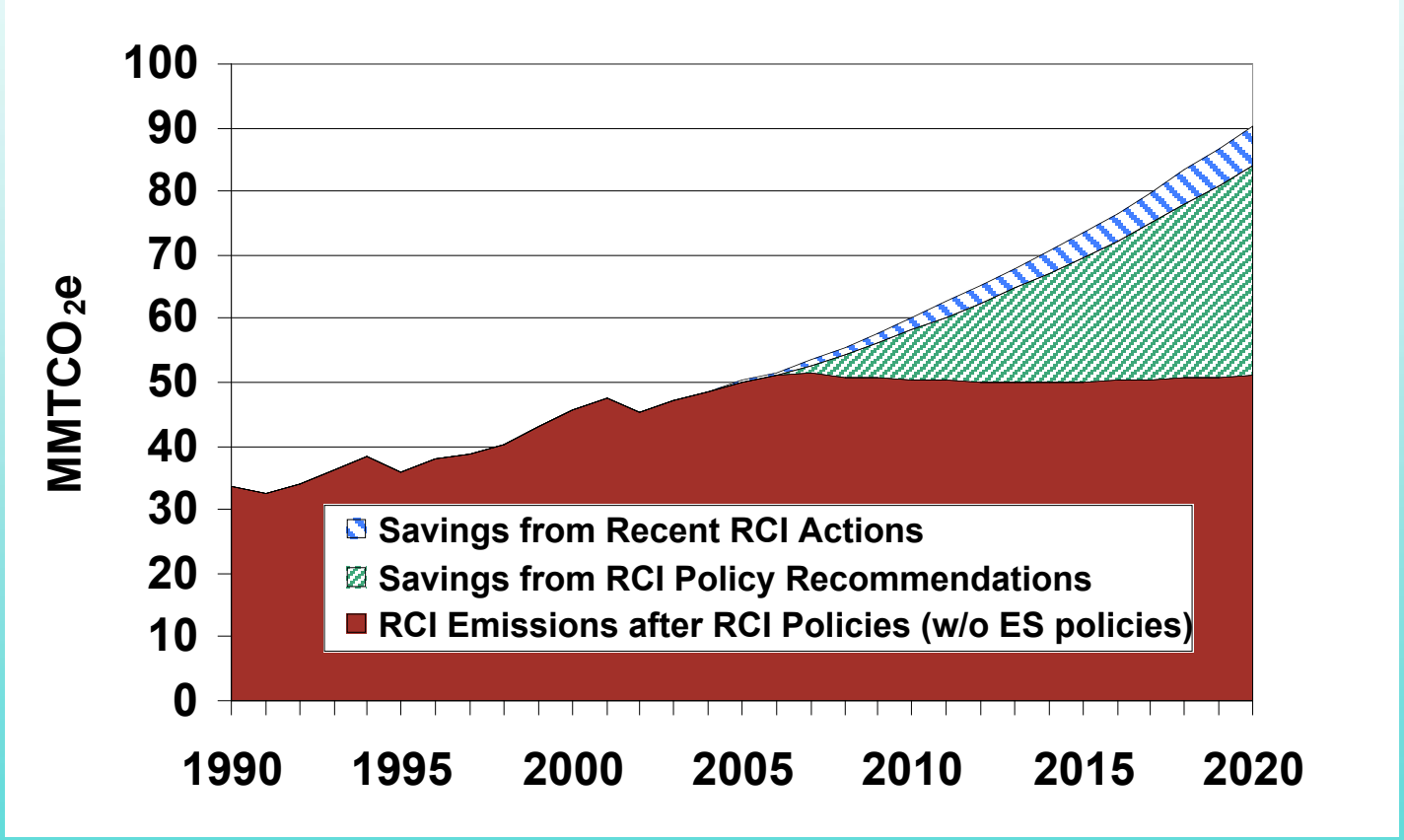
Ex: Arizona Climate Plan Results



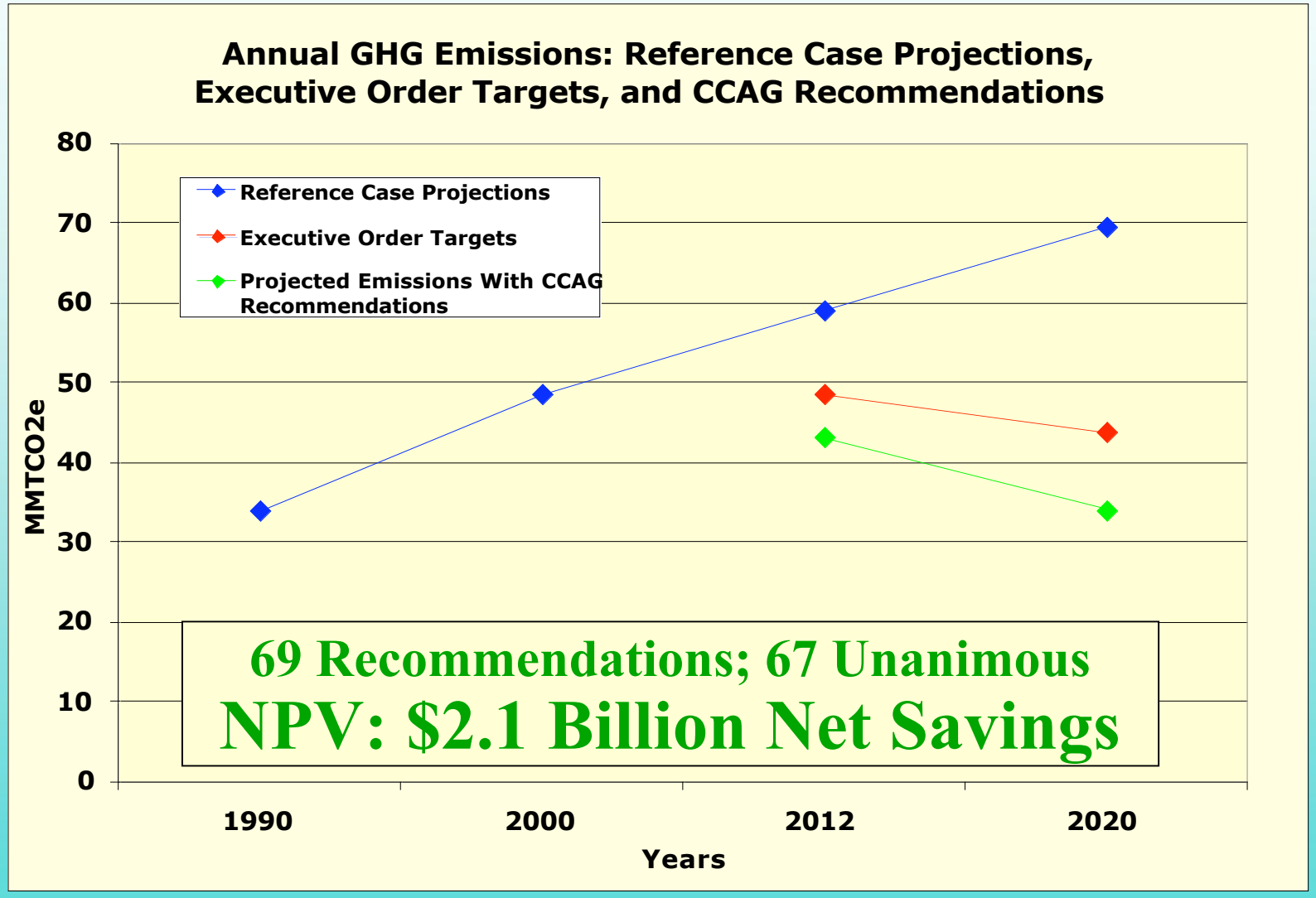
Costs of GHG Reduction Strategies



Ex: Arizona Energy Efficiency



New Mexico Climate Plan Results



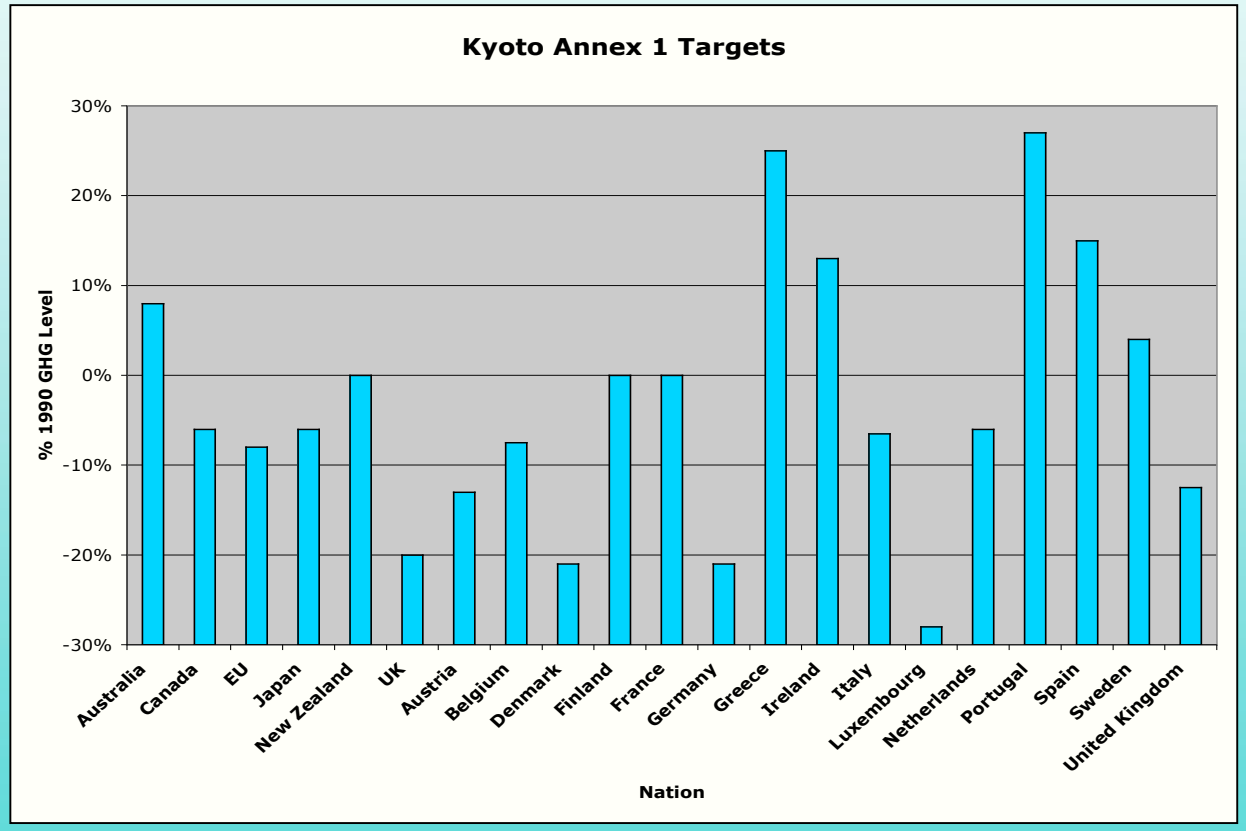
Top Down v. Bottom Up

State Climate Goals

State	1990-2020 GHG Forecast	State Goals	Climate Plan Coverage
Arizona	149%	2000 levels by 2020; 50% below by 2040	106%
California	41%	- E.O.: 2000 level by 2010; 10% below by 2020; 80% by 2050 - AB-32: 1990 levels by 2020	100%
Connecticut	32%	1990 level by 2010; 10% below by 2020; 75% by 2050	100%
Maine	34%	1990 level by 2010; 10% below by 2020; 75% by 2050	100%
New Jersey	?	5% below 1990 by 2005	100%
New Mexico	48-64%	2000 level by 2012; 10% below by 2020; 75% by 2050	137%
Oregon	38%	1990 level by 2010; 10% below by 2020; 75% by 2100	85%
Puget Sound	37%	1990 level by 2010; 10% below by 2020; 75% by 2100	100%
Rhode Island	35%	1990 level by 2010; 10% below by 2020; 75% by 2050	100%
Vermont	?	25% below 1990 levels by 2012; 50% below 1990 by 2028; 75% by 2050	?

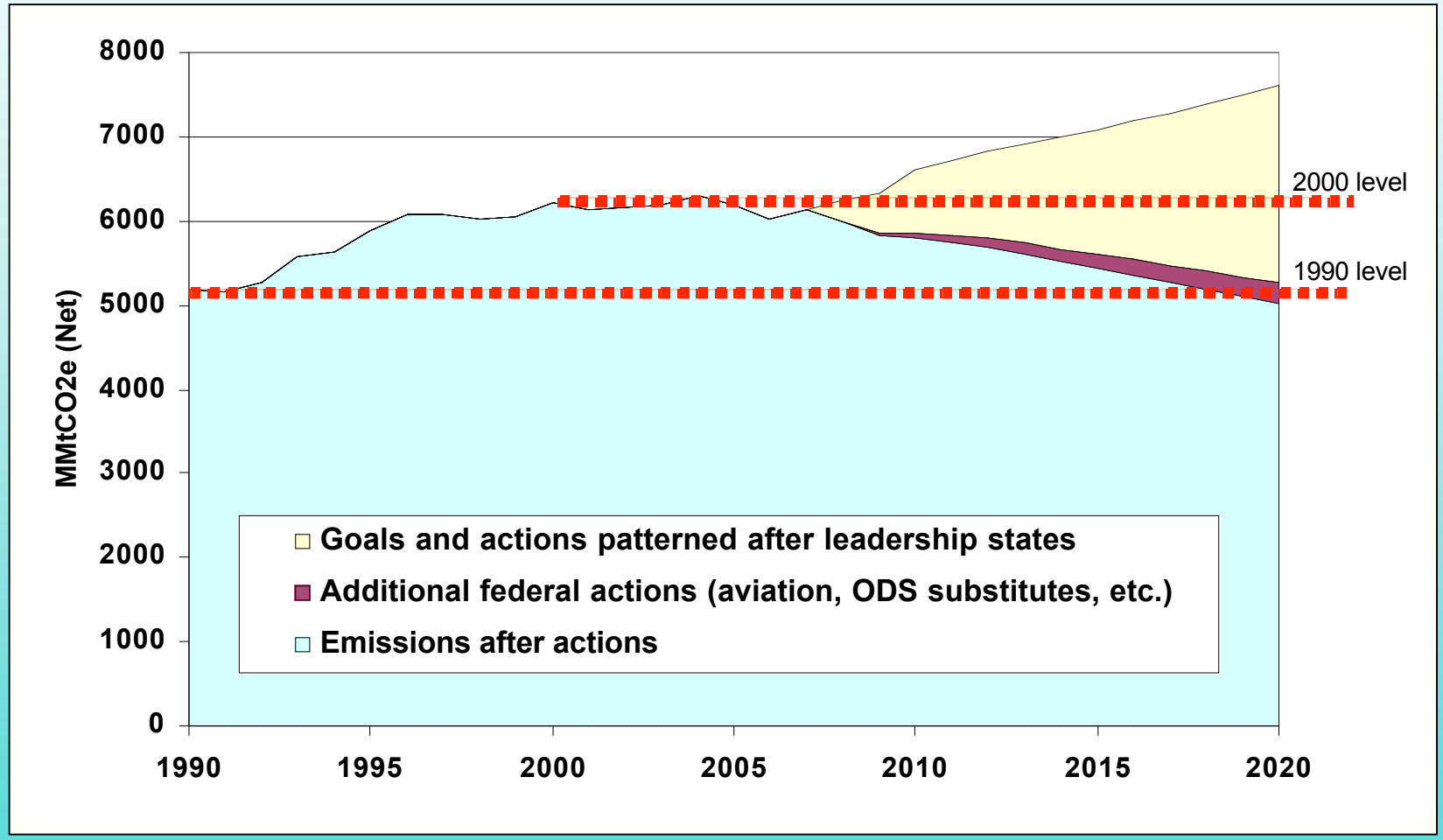
Common But Differentiated Targets

International GHG Targets



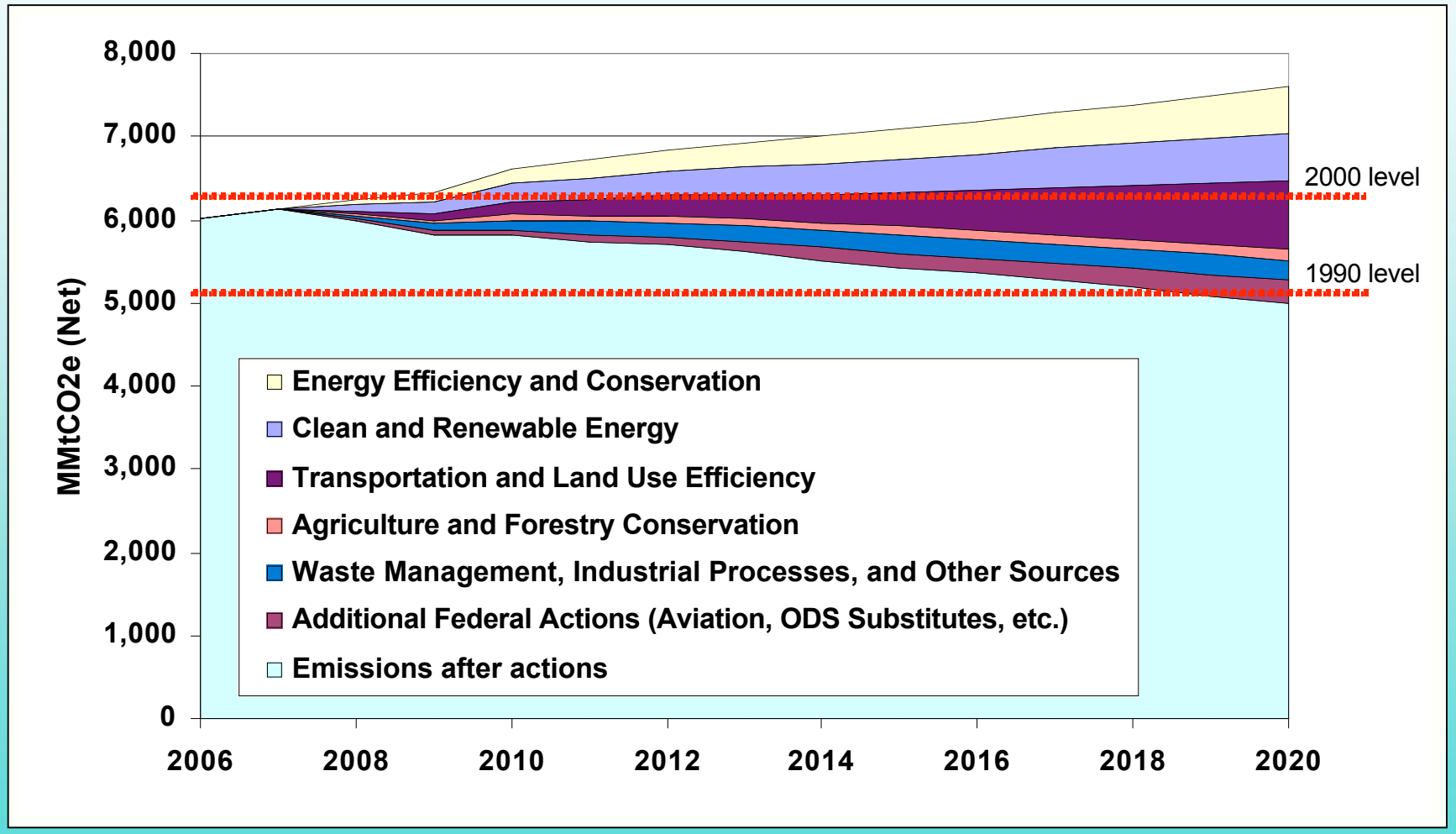
National Emissions Trajectory

Based on estimated reductions below BAU from planned/implemented actions in leadership states

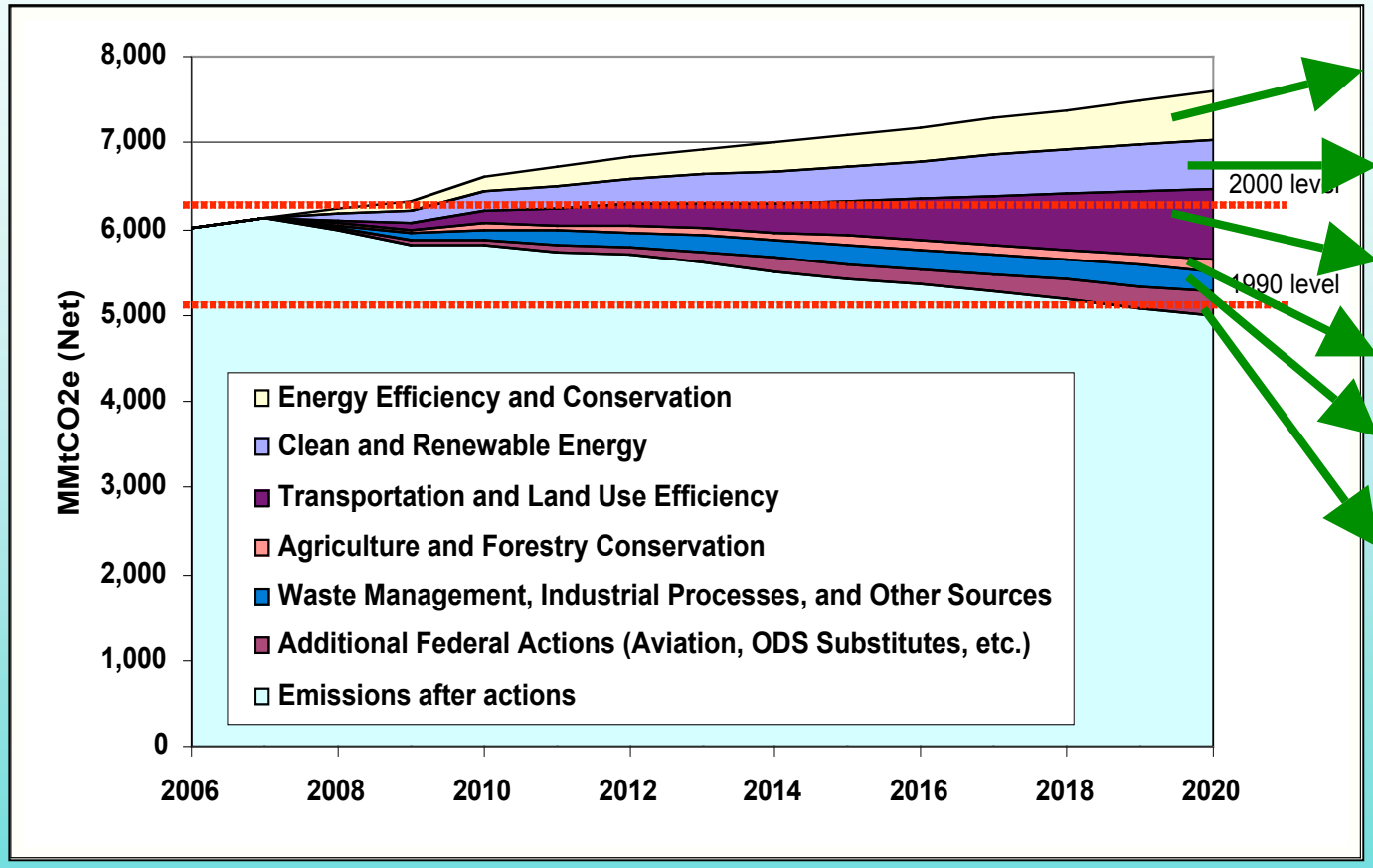


How Leadership States Are Doing It

(States' "wedges" scaled to national GHG emissions)



Summary of States Potential



% of Jaws	Sample Cost
~24%	-$10 to -$30
~24-30%	$7 to $21
~20-36%	-$32 to -$36
~6-9%	-$1 to -$5
~11-18%	TBD
~6-18%	TBD

Advantages of Youth…